

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004666**Date Inspected:** 18-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Geng Wei, Zhang Bao Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Assembly**Summary of Items Observed:**

This report serves to document the events occurring on this date at the following location. Caltrans Quality Assurance (QA) Inspector Robert Vatcher arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

**OBG Assembly Bay II**

5AE- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

5BE- Welding operation observed at longitudinal diaphragm LD003-016-005 to floor beam SSD18-Panel Point 34 by qualified welder Xu Liguang 200114. ZPMC QC personnel Chen Chih Ming was present for this operation.

As well, joining operation between Longitudinal diaphragm LD004-015 to Bottom Plate BP111A by qualified welder Wang Linjiang 051356 by the FCAW welding process. ZPMC QC personnel Shi Lei was present for this welding operation.

5CE- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

3AE- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No

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Observed Welding Activity elsewhere as well.

3BE- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

4AE- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

4BE- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

Mid bay-

Diaphragm plate to deck panel joining/ tacking at DP297-001, DP487-001.

NPI of Oregon continues to perform evaluations utilizing the phased array ultrasonic testing method for locations and sizing of partial penetration weld and associated cracks for acceptance in the deck panel to U-rib locations.

5CW- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

5BW- Welding of side plate stiffener plates to commence this morning at SP748-001 welds 15 through 24. QA observed ZPMC QC personnel Fu You Shen, Wu Shi Gao & AB/ F representative Li Hao present for this evolution.

Welding operation in two locations at the FL-3 to side plate by two welders in the 4G position.

5AW- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

4BW- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

4AW- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well. However DP274A & DP65A have been previously joined but only filled out partially approximately 50%. The same condition applies to Deck Panels DP68A & DP67 respectively. Fu You Shen explained that joining operations may continue today sometime.

3BW- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well.

3AW- No deck panel to deck panel or diaphragm plate to floor beam flange welding occurring as of this time. No Observed Welding Activity elsewhere as well. As well ceramic backing was observed placed on deck panels DP49A to DP32A and DP52A to DP51A. Li Hao mentioned that joining operations would commence perhaps this

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afternoon.

North Bay of OBG Assembly- Side Plate to Side Plate fit up and tacking in progress at SP756A to SP518A. QA measured in process root openings to be at a maximum of 7.0 to 8.0 millimeters. ZPMC QC personnel Geng Wei is present for this operation

Back grinding operations being performed at Side Plate to Side Plate SP100A to SP127A.

Bottom plate to Bottom Plate joining operation by the FCAW welding process in the 1G position by qualified welding operator He Junrong. ZPMC QC personnel Zhang Xiao Ming is present for this welding operation. QA performed welding procedure specification (WPS) verification as well and observed the following. FCAW process utilizing 1.4 mm diameter Supercored 71H E71T-1 electrode wire in DCEP mode. Welder He Junrong 201215, a qualified welding operator was observed as well utilizing a stringer bead method for this evolution in the middle fill passes per the WPS-B-T-2231-B-U2-F-1. QA measured amperage to be 277 (average), voltage at 29.5 and a travel speed of approximately 495 mm per minute at BP90A to BP36A.

### Summary of Conversations:

No relevant conversations this date.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Peter Dauterman, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Vatcher,Robert
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Quality Assurance Inspector
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<b>Reviewed By:</b>	Cuellar,Robert
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QA Reviewer
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